EDEMA, CONGESTIVE HEART FAILURE, AND THE TERRAIN OF THE NETHERLANDS

MEDICAL practitioner who yearns to withdraw from his consulting room and his clinic, or a medical historian who wishes to disappear-spurlos-into a library, might benefit the learned world by devoting his remaining span to the history of cardiology and cardiovascular pathology. There are problems aplenty.

For the physician who would take off on an altogether different tack there is great appeal in geography and cartography, two kindred sciences which continue to offer uncharted domains for the studious investigator. In these areas of knowledge a few of our medical predecessors have worked. Some were as meritorious as the indigent physician Bernhardus Varenius (1622-1650), whose Geographia Generalis¹ was annotated and reissued by Isaac Newton,2 or the diligent Doctor Christopher Packe (1686-1749), who made his daily round in Kent and became its cartographer, or the immortal Doctor Nicholas Copernicus, who is credited with having made maps of Livonia and Prussia, now no longer extant.3 To this greatly abbreviated catalogue we may even add the name of the cartographer Nicolaas Cruquius, who studied medicine under Boerhaave but apparently did not complete the course -an early Dutch "dropout."

To the physician who has been overfilled with clinical responsibilities or overburdened by problems of research or study, the greatest attraction may not be in books or maps but in travel, preferably to some place beyond excessively easy access by telephone.

For travel or study what country can excel the Netherlands? The people are civilized, monumentally courageous, and exemplary in practicality well combined with high-mindedness. The food is good and books are numerous. Countless paintings, prints, and photographs prepare the visitor for the charming land that he will see.

The old Dutch clinicians and anatomists knew the same flat terrain that we admire today-the waterways, the dykes, and the polders. But

Amsterdam, 1650 and later editions.
 Cambridge, 1672 and later editions.
 Bagrow, L.: History of Cartography, Skelton, R. A., editor. Cambridge, Mass., Harvard University Press, 1964, p. 153.

now a nagging question obtrudes itself. Did any of these veteran observers perceive an analogy between edema or hydrothorax and the floods which have been a constant threat in Dutch history?

A reliable answer to this question would necessitate a survey of van Diemerbroeck, Bontius, Camper, Boerhaave, and their innumerable predecessors, contemporaries, and successors. Such enterprises should be started early or never.

Recently the first hint of an answer turned up semiserendipitously through the reading of Conrad Victor Schneider's prolix and tortuous treatise On Catarrhs,4 a work that is best avoided, except perhaps as diversionary reading for souls in purgatory. Schneider⁵ quotes the Dutch clinician and anatomist Nicolaas Tulp (1593-1674), who was immortalized by Rembrandt in The Anatomy Lesson. Tulp's book of medical observations⁶ includes a chapter on apoplexy entitled Morbus attonitus, a sanguine. The text contains the following comment:

Sicuti namque disruptis aggeribus, submerguntur prata: sic obruitur quoque facile cerebrum, a sanguine, praesertim si, vel effringatur, vel enervetur, membraneum illud ostiolum: quod, ad coercendum sanguinis impetum, internis juguli venis, incomprehensibili artificio, a provida natura inditum. Habent quidem & aliae venae, similia repagula. ⁷

A free translation follows:

For, just as when the ramparts are ripped apart, the meadows are flooded, in the same way the brain is easily overcome by the blood, especially if that membranous valve is broken or weakened. Wise Nature, with a skill beyond understanding, has placed it in the internal jugular veins to control the impact of the blood. Other veins likewise have similar restraints.

Nicolaas Tulp seems to have found an analogy between the great veins of the human body and the great waterways of his homeland. The same comparison may well have suggested itself also to some of his compatriots and colleagues, whose voluminous writings await the inquiring student.

^{4.} Schneider, C. V.: Liber de catarrhis. Wittenberg, 1660-1662. (Five books, published serially.)

^{5.} Schneider, C. V.: Liber quintus de cararrhosorum diaeta. . . . Wittenberg, 1662, book V, section 2, chap. 4, p. 298. I thank the National Library of Medicine for supply-

ing a photocopy.

6. Tulpius, N.: Observationum Medicarum Libri Tres. Amsterdam, Elzevirius, 1641, book 1, chap. 7, pp. 14-16.

7. Ibid., pp. 15-16.